

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

**Gulf South Pipeline Company, LP
Montpelier Compressor Station
Montpelier, St. Helena Parish, Louisiana
Agency Interest Number: 71
Activity Number: PER20080002
Proposed Permit Number: 2540-00003-V2**

I. APPLICANT

Company:

Gulf South Pipeline Company, LP
477 Hwy 441
Holden, LA 70744

Facility:

Gulf South Pipeline Company, LP - Montpelier Compressor Station
447 Hwy 441, about 1.5 miles south of Montpelier, LA 70722

UTM coordinates are 723.508 kilometers East and 3393.445 kilometers North, Zone 15.

II. FACILITY AND CURRENT PERMIT STATUS

Montpelier Compressor Station, natural gas compression facility (SICC 4922), receives natural gas via pipeline, boosts the pressure of the gas utilizing 12,500 horsepower of compression to transport the gas down the pipeline. Station operating pressures can vary widely, dependent upon customer driven activity, and is currently limited to a maximum operating pressure (MAQP) of 930 psig. Typical operating pressures range from about 540-715 psig on the suction side of the station to about 805-930 psig on the discharge side of the station; although, the station may operate at times outside of these ranges. Maximum station throughput at design conditions is 703 MM scf/day of natural gas.

Compression at the facility is maintained utilizing five (5) 1600 hp (E-1 to E-5) and three (3) 1500 hp (E-6 to E-8) two stroke lean burn, natural gas-fired, reciprocating engine driven compressor units. The natural gas stream is cooled, after discharge from the compressors, by routing the gas through the coils of the fin/fan unit, a closed pipe system, which allows the absorbed heat to radiate, into the ambient air.

Also onsite are eight (8) natural gas scrubbers (separators), a 210 bbl condensate storage tank (C-1), a station blowdown vent (B-1), tank truck loading for the condensate tank (T-1), a 300 bbl engine oil storage tank (T-2), an oil/water separator (S-1), and facility fugitives emissions (F-1). Facility fugitives include minor particulate emissions generated by vehicles traveling on unpaved roads. A 408 Hp four stroke rich burn Ingersoll-Rand reciprocating engine driven auxiliary generator (E-9) rated at 280 kW is utilized to produce electrical power for the plant during power outages.

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The facility, which started operation in 1952, was originally owned by United Gas Pipeline Company, who transferred ownership, on November 5, 1993, to Koch Industries, Inc. The facility again changed ownership on April 3, 2001, to Gulf South Pipeline Company, LP.

Gulf South Pipeline Co LP - Montpelier Compressor Station is a designated Part 70 source. An initial Part 70 Operating Permit No. 2540-00003-V0 was issued on May 11, 2004. Montpelier Compressor Station currently operates under Part 70 Operating Permit No. 2540-00003-V1 dated July 7, 2006, and amended October 6, 2008.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

An original application and Emission Inventory Questionnaire (EIQ) dated November 4, 2008, requested a minor modification and a Part 70 Operating Renewal Permit, No. 2540-00003-V2. Additional information dated May 29, June 6, and June 17, 2009, was also received.

Project

Gulf South Pipeline Company, LP proposes to renew the Part 70 operating permit for the Montpelier Compressor Station and modify the permit as follows:

- Correct heat inputs for the engines (E-1 through E-9) not supported by the stack test data: previous calculations used emission factors for pollutants, other than NO_x and CO, that were modified from AP-42 factors using a generic conversion factor of 7,500 BTU/hp-hr. Recent stack tests revealed that a conversion factor of 10,250 BTU/hp-hr is more appropriate for the engines at this site;
- Update emission rates for criteria pollutants other than NO_x and CO and include TAP/HAP emissions based on corrected heat inputs, AP-42 emission factors, and operating conditions;
- Revise the permit to include the maximum fuel rate limits in accordance with Chapter 22 regulations for each engine (E-1 through E-5), measured on a 30 day rolling average during the ozone season, which correspond to parameters determined during original stack testing (August 18, 2005) for engines E-3 and E-4 and triennial stack testing (August 1, 2008) for engines E-1, E-2 and E-5; and
- Incorporate minor format and typographical changes.

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Proposed Permit

Permit No. 2540-00003-V2 will be a minor modification and a Part 70 Operating Renewal Permit for the Montpelier Compressor Station.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	20.35	22.05	+ 1.70
NO _x	1401.15	1398.90	- 2.25
CO	333.14	332.24	- 0.90
SO ₂	0.25	0.32	+ 0.07
VOC	109.10	105.51	- 3.59

VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change*
1,3-Butadiene	-	0.461	+ 0.461
2,2,4-Trimethylpentane	-	0.565	+ 0.565
Acetaldehyde	0.327	4.353	+ 4.026
Acrolein	0.218	4.366	+ 4.148
Benzene	0.917	1.333	+ 0.363
Ethylbenzene	0.007	0.068	+ 0.061
Formaldehyde	10.615	30.977	+20.362
Methanol	-	1.411	+ 1.411
n-Hexane	0.411	0.722	+ 0.311
Naphthalene (& Methyl naphthalenes)	-	0.040	+ 0.040
Toluene	0.266	0.677	+ 0.411
Xylene	0.015	0.182	- 0.167
Total TAPs	12.776	45.195	+ 0.000
Other VOC	96.324	60.318	- 36.006
Total VOC	109.10	105.513	- 3.587

* Changes in VOC speciation reflects updated calculations based on corrected heat input for the engines. No actual change in emissions occurred.

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IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
Facility	Chemical Accident Prevention Provisions [40 CFR 68]	DOES NOT APPLY. Per LAC 33:III.5907, facility does not produce, process, handle, or store any substance listed in paragraph 68.130 or Tables 59.0 and 59.1 of Chapter 59 in an amount greater than the threshold quantity.
	Chemical Accident Prevention and Minimization of Consequences [LAC 33:III.Chapter 59]	
	Subpart HHH - National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities [40 CFR 63]	DOES NOT APPLY. Per 40 CFR 63.1270(c), There are no glycol dehydration units at the station.
	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.Chapter 51]	DOES NOT APPLY. Facility is not a major source for Toxic Air Pollutants (TAPs) under LAC 33:III.Chapter 51. Formaldehyde emissions are from combustion of Group 1 virgin fossil fuels, which are exempt, per LAC 33:III.5105.B.3.a.
	Control of Emission of Organic Compounds; Waste Gas Disposal [LAC 33:III.2115]	DOES NOT APPLY. Units meet 100 lb VOC/24 hr exemption per LAC 33:III.2115.H.1.c.
EQT 1 - 8 Compressor Engines	NESHAP Subpart ZZZZ - National Emission Standards for Stationary Reciprocating Internal Combustion Engines (RICE) [40 CFR 63]	DOES NOT APPLY. Per 40 CFR 63.6590(b)(3), engines are existing (1952) 2-stroke lean burn engines at a major source of HAP; No reconstruction on or after December 19, 2002.
EQT 9 Auxiliary Generator	NESHAP Subpart ZZZZ - National Emission Standards for Stationary Reciprocating Internal Combustion Engines (RICE) [40 CFR 63]	DOES NOT APPLY. Per 40 CFR 63.6590(b)(3), 4SRB engine is an existing (1952) emergency stationary RICE; No reconstruction on or after December 19, 2002.

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ID No.	Requirement	Note
EQT 1 - 9 Engines, Generator	NSPS Subpart JJJJ - New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines (SI ICE) [40 CFR 60]	DOES NOT APPLY. Per 40 CFR 60.4230(a)(4), SI ICE engines constructed prior to June 12, 2006; No modification or reconstruction after June 12, 2006.
	Emission Standards for Sulfur Dioxide Emission Standards for Sulfur Dioxide Emission Limitations [LAC 33:III.1503.C]	DOES NOT APPLY. Per LAC 33:III.1502.A.3, no single point source has the potential to emit 5 tons per year or more of SO ₂ .
EQT 6 - 8 Compressor Engines	Control of Emissions of Nitrogen Oxides [LAC 33:III. Chapter 22]	EXEMPT. Engines are located in the Region of Influence. Per LAC 33:III.2201.C.3.b, engine horsepower ratings are de-rated to be <1500 hp during the ozone season under federally enforceable conditions.
EQT 9 Auxiliary Generator	Control of Emissions of Nitrogen Oxides [LAC 33:III. Chapter 22]	EXEMPT From LIMITS. Engine is located in the Region of Influence. Per LAC 33:III.2201.C.6, engine operates <400 hr/yr during ozone season and in accordance with LAC 33:III.2201.H.12.
EQT 11 and EQT 14 Storage Tanks C-1 and T-2	NSPS Subpart Kb - New Source Performance Standards for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60]	DOES NOT APPLY. Per 40 CFR 60.110b(a), Constructed 1997; Capacities <20,000 gals
	Control of Emission of Organic Compounds [LAC 33:III.2103.A]	DOES NOT APPLY. Per LAC 33:III.2103.G.1, the 210 bbl tank (C-1) has a capacity <420,000 gals and stores condensate. Per LAC 33:III.2103.A, the 300 bbl tank (T-2) stores Engine Oil with a vapor pressure at storage temperature < 1.5 psia.
EQT 12 Oil/Water Separator	Control of Emission of Organic Compounds Oil/Water Separation [LAC 33:III.2109]	EXEMPT From LAC 33:III.2109.A per LAC 33:III.2109.B.4. Oil/Water Separator emits less than 100 tons/yr regulated hydrocarbon (uncontrolled)
The above table provides explanation for the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X (Table 1) of this permit.		

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Prevention of Significant Deterioration/Nonattainment Review

Prevention of Significant Deterioration (PSD) /Nonattainment Review does not apply

Streamlined Equipment Leak Monitoring Program

Does not apply

MACT Requirements

Does not apply

Air Quality Analysis

Emissions associated with the proposed renewal and modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

Dispersion Model(s) Used: ISCST3 (Screen)

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
NO _x	Annual Average	*44 µg/m ³	(100 µg/m ³)
1,3-Butadiene	Annual Average	0.0068 µg/m ³	0.92 µg/m ³
Acetaldehyde	Annual Average	0.06 µg/m ³	45.50 µg/m ³
Acrolein	8 hr Average	1.98 µg/m ³	5.40 µg/m ³
Benzene	Annual Average	0.34 µg/m ³	12.00 µg/m ³
Formaldehyde	Annual Average	0.46 µg/m ³	7.69 µg/m ³

* Done for Permit No. 2540-00003-V0 dated May 11, 2004.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

Does not apply.

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VI. PERIODIC MONITORING

The Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit, or explained in Table 2 of the Air Permit Briefing Sheet.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NOX) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

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Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.